

ILLINOIS DEPARTMENT OF PUBLIC HEALTH

C. St. Clair Drake, M. D.,

Director.

Springfield, Ill.

Diet Lists

FOR

Infants and Children

Prepared by

DIVISION OF CHILD HYGIENE AND
PUBLIC HEALTH NURSING

(Additional copies supplied on request addressed to Dr. C. St. Clair Drake, Director
of Public Health, Springfield, Ill.)

[Printed by authority of the State of Illinois.]

DIET LIST FOR INFANTS AND CHILDREN.

PREPARED BY

DIVISION OF CHILD HYGIENE AND PUBLIC HEALTH NURSING
ILLINOIS DEPARTMENT OF PUBLIC HEALTH.

IT must be borne in mind that breast feeding is insistently urged in every case where it is possible. No considerations of convenience should lead a mother to sacrifice the welfare of her baby. In cases where the supply is not sufficient, if the mother be healthy, it is far better to let the child have whatever is obtainable from the breast, and supplement from artificial sources. Many cases would avoid the severer nutritional difficulties could they have even partial feedings of breast milk.

It is well to bear in mind that while breast milk is best for the first eleven or twelve months, it should be supplemented by one of the cereal waters and cow's milk at about the seventh month.

This supplementary feeding should be increased until the child is weaned, which should be about the eleventh month.

In presenting these diet lists it should be understood that they are suggestive only; also that they are for healthy children. Sick children need care as such. The physician must decide in each case just what diet the sick child should have.

Children with digestive and nutritional difficulties must be fed according to their individual needs. The lists here offered may be considered as approximately standard for the various ages. Modifications are to be made as needed in various cases.

A child should have one and one-half ounces of milk each day for every pound body weight, i. e., a child weighing eight pounds should have about twelve ounces of milk each day; a child weighing twelve pounds should have about eighteen ounces of milk per day, etc. To this milk boiled water and some form of sugar should be added to bring the milk to the proper dilution and strength in calories. A child should have about forty-five calories for each pound of body weight each day, i. e., a child weighing eight pounds needs about 360 calories each day.

Whole cow's milk contains thirty calories for each ounce. Granulated sugar contains one hundred twenty calories each ounce. Other sugars should be prescribed as the physician deems suitable.

First Month.

Whole Milk.....	10 to 12 ounces
Granulated sugar.....	$\frac{2}{3}$ to 1 ounce
Boiled water.....	8 to 10 ounces
Divide into eight bottles— $2\frac{1}{2}$ ounces each.	
Feeding intervals—three hours.	

Second Month.

Whole Milk.....12 to 16 ounces
 Granulated sugar..... $\frac{2}{3}$ to $1\frac{1}{3}$ ounces
 Boiled water.....12 to 16 ounces
 Divide into seven bottles—4 ounces each.
 Feeding intervals—three hours, omitting one night feeding.

Third to Fifth Month.

Whole Milk.....14 to 18 ounces
 Granulated sugar..... $\frac{2}{3}$ to $1\frac{2}{3}$ ounces
 Boiled water.....12 to 16 ounces
 Divide into six bottles—5 ounces each.
 Feeding intervals—four hours.

Fifth to Seventh Month.

Whole Milk.....18 to 22 ounces
 Granulated sugar.....1 to $1\frac{2}{3}$ ounces
 Boiled water.....14 to 18 ounces
 Divide into six bottles—6 ounces each.
 Feeding intervals—four hours.

Seventh to Ninth Month.

Whole Milk.....22 to 26 ounces
 Granulated sugar.....1 to 2 ounces
 Boiled water.....14 to 18 ounces
 Divide into five bottles—8 ounces each.
 Feeding intervals—four hours, omitting one night feeding.

Ninth to Twelfth Month.

Whole Milk.....26 to 30 ounces
 Granulated sugar.....1 to $1\frac{1}{2}$ ounces
 Boiled water.....12 to 14 ounces
 Divide into five bottles—8 ounces each.
 Feeding intervals—four hours, omitting one night feeding.

At about seven months of age supplementary feeding should be begun. The following lists are standard up to twenty-four months of age. It should be understood that children five months of age may have one-half ounce of strained orange juice daily. It is better to give this two hours after the first morning feeding. Give cooled boiled water often during the day. It may also be suggested that from the beginning barley water or oatmeal water is often used to advantage in diluting the milk instead of plain water:

Seven Months.

Five feedings a day.

- 6 A. M. Regular breast or modified milk feeding.
- 8 A. M. One to two ounces of orange juice (always given between feedings).
- 10 A. M. Substitute for one regular feeding one ounce of well-cooked cereal gruel, such as farina, oatmeal or barley, with about two ounces of milk.
- 2 P. M. Regular feeding.
- 6 P. M. Regular feeding.
- 10 P. M. Regular feeding.

Eight Months.

Five feedings daily. Increase amount of cereal feedings, and include farina, oatmeal, cream of wheat, barley and rice.

Nine Months.

Five feedings daily.

- 6 A. M. Regular feeding.
- 8 A. M. Orange juice or one-half ounce of prune pulp or juice.
- 10 A. M. Milk feeding, cereal, swieback or toast.
- 2 P. M. Soups with a cereal, split pea soup, small portions of strained vegetables, such as spinach, tomatoes and carrots.
- 6 P. M. Milk feeding and toast.
- 10 P. M. Milk feeding.

Ten to Twelve Months.

Five feedings daily. Same as nine months, including part of a soft-boiled egg every other day. Small piece of bacon, custard, and cornstarch pudding.

FOOD VALUES.

Cereals promote growth. Farina is the most easily taken, while oatmeal is the best unless it affects the bowels.

Eggs contain iron and phosphorus.

Fruit juices—orange, prune, apple, pineapple—help to counteract constipation and add ash for growth, neutralizing acids and absorbing the gases of the stomach.

One green vegetable should be included in the daily diet after the first year; given at first in small amounts and gradually increased as the child grows accustomed to it.

Vegetables—spinach, green peas, asparagus, young beets, carrots—well-cooked and strained, are of value because of the iron they contain.

When teeth are developing, stale bread, toast or zwieback should be given to aid in the forming of the habit of mastication, which is so important to easy digestion of food later on.

An infant should *never* be given tea, coffee or candy.

DIET FOR CHILDREN.

From Twelve to Twenty-four Months.

There should be five feedings in the twenty-four hours, given at four-hour intervals during the day, and leaving an eight-hour interval at night. Nothing should be given between feedings except water, and this should be given liberally, especially in hot weather.

- 6 A. M. Milk, warmed, 8 ounces.
- 9 A. M. Fruit juice, i. e., juice from half an orange, or two ounces of prune juice.
- 10 A. M. Cereals and milk. One piece of toast or swieback. Milk—four to eight ounces. Only well-cooked cereals should be used, and these should be strained.
- 2 P. M. Vegetables or vegetable soup. Spinach, carrots, fresh peas, string beans, asparagus tips, cauliflower and potatoes. Creamed soups may be made from these vegetables. Fruit or milk. Beef juice, meat broth, egg or scraped meat.
- 6 P. M. Same as at 10 A. M.
- 10 P. M. Same as at 6 A. M.

DIET FOR CHILDREN.

From Two to Four Years of Age.

At least a quart of milk should be taken in twenty-four hours. Four feedings in twenty-four hours.

7 A. M. Cereal, well-cooked with milk and sugar.

9 A. M. Fruit juices—Orange, prune, grape.

11-12 A. M. Vegetables, and soups.

Spinach, carrots, fresh peas, string beans, dried beans, asparagus tips, cauliflower, strained stewed tomatoes, squash and boiled onions.

Meats—rare roast beef, chicken, fish and squab.

4 P. M. Milk, toast and butter.

8 P. M. Cereal with milk and sugar, bread and butter.

DIET FOR CHILDREN.

From Four to Six Years.

At least one quart of milk given in twenty-four hours. Four feedings in twenty-four hours.

7 A. M. Cereal, well-cooked with milk and sugar. Bread and butter.

9 A. M. Fruit juices, orange, prune, grape, apple and prune pulp.

12 A. M. Soups—rare roast beef, beefsteak, poultry, fish, lamb chop and squab.

Vegetables. Bread and butter. Custards, cornstarch, cream cheese.

4 P. M. Milk, toast and butter.

7 P. M. Same as 12 A. M. except that an egg should be given instead of meat.

DIET FOR CHILDREN.

From Six to Twelve Years.

At least one quart of milk should be taken in twenty-four hours. Four feedings, in twenty-four hours.

7 A. M. Cereal with milk and sugar. Bread and butter.

9 A. M. Fruits.

12 A. M. Soups. Meats—rare roast beef, beefsteak, chicken, fish, lamb chop. Vegetables. Custards, gelatine, tapioca, cornstarch.

4 P. M. Milk.

7 P. M. Same as at 12 A. M. except that an egg should be substituted for the meat.

Before the sixth year a child should not be given fried foods. Highly seasoned dishes, such as pie, rich puddings, gravies and sauces should be avoided.

Coffee and Tea should *never* be given to children as a beverage.

DIRECTIONS FOR THE PREPARATION OF INFANTS' FOODS.

Cereal Gruel.

Any of the following may be used—barley, oatmeal, rice, arrowroot, corn meal, farina, cream of wheat, hominy, wheaten grits, or any other common cereal preparation to be found on the market, and which requires preparation by cooking. When the flour of these various cereals is used, 3 level tablespoonfuls to each pint of finished product should be taken, except arrowroot, of which one tablespoon should be taken. For the whole or only partially divided grains use three rounded tablespoons

to the pint of finished product. When the flour is used mix with a little cold water to form a paste. Then add to the boiling water and cook in a double boiler for two hours or directly over the flame for 20 to 30 minutes, stirring constantly. When the whole grains are used it is of some help to soak over night. Cooking must be continued until the grains are well broken up, which will be at least one hour directly over the flame or at least 4 to 5 hours in a double boiler. Salt should be added to the water when cooking, $\frac{1}{2}$ level teaspoonful to the pint of finished product. It may be necessary to add water several times to keep up the volume during the prolonged cooking. Whether made from the flour or whole grain the gruel should be strained and water added to make up the intended quantity. For older infants the final dilution may be made with milk. For older infants also $\frac{1}{2}$ the fluid used for farina and all the fluid used for arrowroot may consist of milk.

Cereal Jelly.

Is prepared in the same general manner as is cereal gruel except that it is cooked to twice the strength of gruel. It may be allowed to cool in a mold. This should be given only to older infants able to break up the jelly in the mouth.

Beef Juice.

One-quarter to one-half pound of round steak is broiled slightly and cut into small pieces. Press out the juice with a meat press or potato ricer. Add a small pinch of salt. This may be given as a liquid or mixed with crumbs of dry bread. For feeding do not heat sufficiently to coagulate the albumen. One to two ounces of beef juice usually make a suitable portion.

Meat Broth.

Beef, lamb, mutton, veal or chicken. Take $\frac{1}{2}$ pound lean meat, chopped fine, to one pint of cold water. Cook slowly two to three hours, replacing the evaporated water from time to time so that when finished there will be one pint of broth. Allow to cool, skim off the fat, strain and salt to taste. If chicken is used, remove the skin and fat from $\frac{1}{2}$ a small chicken, chop into fine pieces, bones included. Cook slowly for one to two hours and have one pint when finished. Four to six ounces of broth usually make a suitable serving. It may be served with zwieback or dried bread. Well cooked cereal preparations may be added or cooked into the broth. Any permitted vegetable or suitable mixture of vegetables may also be added after proper preparation or cooked into the broth.

Scraped Meat.

Fine scrapiugs of meat, beef, lamb or chicken, free from fat are shaped into a pat and slightly broiled ou a hot dry spider. Season with a little salt and butter. A few drops of lemon juice may be added. At first one teaspoonful is given and the quantity increased until one table-spoonful is taken. Late in the second year these same meats may be served finely cut or minced instead of scraped. These should be broiled or boiled, never fried.

Eggs.

Drop in boiling water. Immediately turn out the flame and allow to stand for five minutes.

Fruit Juice.

Orange juice—1 to 3 ounces, may be given, diluted somewhat with water and if necessary slightly sweetened. Prune juice— $\frac{1}{2}$ pound of prunes, washed and soaked over night. Cook in the same water, using just enough to cover, until tender. Add a teaspoonful of sugar and strain.

Fruit.

Only well-cooked fruit allowed. Apples, boiled, (Apple Sauce) or baked and strained and the pulp of stewed prunes. A small portion of ripe banana is permitted when well-baked.

Vegetables.

The following vegetables may be permitted; spinach, carrots, fresh peas, string beans, dried beans, asparagus tips, cauliflower and potatoes.

They should be well cooked and pressed through a fine sieve before serving. The water in which the vegetables are cooked contains food materials of some value and should be retained so far as is convenient. The vegetables should be cooked in water which has been salted.

One to two tablespoonfuls of vegetable pulp usually make a proper serving. They may be served with a little butter and salt and in the case of some vegetables, such as spinach, it is often suitable to mix in a teaspoonful of fine bread crumbs.

Creamed Vegetable Soup.

The vegetables above named may be served as a creamed soup which may be prepared as follows:

To 2 tablespoonfuls of vegetable pulp prepared as described above, add four ounces of water in which the vegetables were cooked, four ounces of milk, $\frac{1}{2}$ teaspoonful of flour, $\frac{1}{2}$ teaspoonful of butter and sufficient salt. Boil sufficiently to cook the flour.

Cornstarch Pudding.

Mix one pint of milk, two tablespoonfuls of cornstarch and one tablespoonful of sugar. Flavor to taste. Boil eight to ten minutes. Allow to cool in a mold.

Custard Pudding.

Mix one egg, six ounces of milk and one teaspoonful of sugar. If a heavier pudding is desired one teaspoonful of flour is also added. Place the mixture in a cup and the covered cup in a saucepan of water. Boil for ten minutes—longer if flour has been added.

"Pap."

To one pint of boiling milk add one level tablespoonful of butter and while stirring constantly, a thoroughly beaten egg. Then add $1\frac{1}{2}$ level tablespoonfuls of flour made into a paste and continue the boiling for ten minutes. Add a pinch of salt before removing from the fire. Serve plain or with milk and a little sugar.

Prune Jelly.

Cover $1\frac{1}{4}$ pounds of selected, washed prunes with water and cook slowly until thoroughly done. Rub through a sieve. Add sugar to sweeten and make the volume up to one pint with water. To this add $\frac{1}{4}$ package of gelatine (one level tablespoon) dissolved in eight ounces of boiling water.

Gelatin with Milk and Starch.

Dissolve one teaspoonful of gelatin in eight ounces of boiling water. While boiling add four ounces of milk and one teaspoonful of arrowroot or cornstarch, made into a paste in cold water. Cook for ten or fifteen minutes. It may be sweetened slightly while cooking or served with milk and sugar.

Junket.

Mix with eight ounces of milk one teaspoonful of sugar and any one of the following: $\frac{1}{2}$ teaspoonful of chymogen or pepsin, one teaspoonful of essence of pepsin or a "junket" tablet. Allow to stand at about 100° F. for 15 minutes or until it comes to a clabber. It may be flavored with vanilla before coagulation.

Barley Water.

Barley flour—one ounce. Boiling water—one quart. Mix flour with little cold water to form smooth paste. Add to boiling water. Cook in double boiler for two hours. Strain. If no double boiler, cook directly over flame for twenty or thirty minutes. Add enough water to bring up to quart.

Barley Gruel.

Barley flour—2 ounces. Boiling water—one quart. Salt. Follow directions for barley water.

Protein Milk (Albumen or Eiweiss).

Whole milk—1 quart. Buttermilk—1 pint. Boiled cold water—1 pint. Rennet—enough to coagulate one quart of milk, or Essence of pepsin— $\frac{1}{2}$ ounce may be used, or Chymogen (Armour & Co.) one even teaspoonful to one quart of milk.

Heat milk to 100° F. to 120° F. not over. Add pepsin and stir well. Place on ice or in cool place for at least 40 minutes to coagulate milk. Drain through gauze to remove all whey from curds. Then work through hair sieve with potato masher, first using water, then add butter milk and put through sieve again and again, until mixture is free from lumps.

Buttermilk Mixture.

Buttermilk—1 quart. Wheat flour— $3\frac{3}{4}$ teaspoonfuls. Saccharose—15 teaspoonfuls.

Mix the flour and sugar with a few teaspoonfuls of buttermilk until a smooth paste results (no lumps). Add rest of buttermilk gradually. Heat to boiling point (212° F.), but do not boil. Heat very slowly and stir constantly. Use double boiler.

PERCENTAGE OF FATS, PROTEIN AND CARBOHYDRATES IN THE FOLLOWING FOODS.

Food.	Fat.	Protein.	Carbohy- drates.	Calories per oz.	Calories per 100 c.c.
Mother's Milk	4	1.5	7.	20	70
Cow's Milk	4	3.5	4.5	20	70
Gravity Cream	16	3.2	3.2	54	180
Whey32	.36	4.75	5	18
Buttermilk	1.25	4	3.25	10	33
Skimmed Milk	1.	3	4.5	10	33
Protein (Eiweiss Milk)...	1.5	3	1.5	10	33
Eagle Brand Milk.....	9.61	8.01	55	120	400
Melin's Food2	11.5	80	120	400
Nestles' Food	5.5	14.3	58.9	116	387
Horlick's Malted Milk...	9.	16.5	68.	135	450

Note.

3 teaspoonfuls=1 tablespoonful.
2 tablespoonfuls=1 ounce.
16 tablespoonfuls=1 cup.
1 cup=8 ounces.
All measurements should be level.